REMARKS

In the Office Action, the Examiner rejected claims 1-30. Applicants respectfully

request reconsideration of the rejections of claims 1-30 in view of the remarks set forth below.

Rejections Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1, 2, 4, 9, 10, 12, 15-18, 21-23,

25-27 and 30 under U.S.C. § 102(b) as being anticipated by Morita (U.S. Patent No.

5,453,749). Specifically, with regard to the independent claims the Examiner stated:

> With regards to Claim 1, 12, 15, 17, 22, 25 and 27,
> Morita (5,453,749) teaches a processor-based method
> comprising:
> receiving a data stream (Column 3, Line 27) comprising
> a plurality of temporally ordered data points (Summary of
> Invention, Column 3, Lines 27-30);
> generating a plurality of sequences (Fig. 3) from a first
> portion of the data stream (Fig. 3, Column 5, Lines 19-29, 43-
> 54); and
> training a detector (Column 5, Lines 19-21) by
> determining a value for a sensitivity parameter (Fig. 3, Step SE)
> using the plurality of sequences (Fig. 3, Column 5, Lines 19-21,
> 43-54).
>
> Office Action, Page 2.

Applicants respectfully traverse this rejection. Anticipation under Section 102 can be

found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v.*

Banner, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to

anticipate under Section 102, every element of the claimed invention must be identically shown

in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To

maintain a proper rejection under Section 102, a single reference must teach each and every

element or step of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir.

1984). Thus, if the claims recite even one element not found in the cited reference, the reference does not anticipate the claimed invention.

Generally, the present application is directed to a data monitoring system that may be employed to monitor various types of measured data. Paragraph 20, lines 1-6. The data monitoring system 10 may monitor a data stream 12 from any one of a number of data producing systems such as computer-related systems, disk drives, web servers, call centers, traffic systems, car engines, patients, stock market, or citation indices, for example. Paragraph 20, lines 6-13. The data stream 12 may generally include a sequence of temporally ordered data values. Paragraph 21, lines 2-3. In accordance with embodiments of the present invention, the data stream 12 is partitioned into a training window 16 and a testing window 18. Paragraph 28, lines 1-2. The training window 16 is defined as a contiguous portion of the data stream 12 that is used to train a detector 22 configured to detect something notable or interesting about the data stream 12, such as a change. Paragraph 29, lines 1-3. The trainer 20 uses the data in the training window 16 to generate a number of sequences 24 and uses the sequences 24 to determine an optimal value for sensitivity parameter 26 to be used to parameterize the detector 22. Paragraph 29, lines 4-7. The sensitivity parameter 26 might be a threshold, for instance, establishing a level that is used to trigger an alarm 28 if the monitored data reaches the value of the sensitivity parameter 26. Paragraph 29, lines 7-9. The value established for the sensitivity parameter 26 is then delivered to the detector 22 such that the detector 22 can use the sensitivity parameter 26 to determine whether the data in the testing window 18 exhibits the type of behavior that the detector 22 should detect. Paragraph 30, lines 1-3. By establishing a value for the sensitivity parameter 26 and setting the detector 22 to detect changes correlative to the sensitivity parameter 26, the detector is "trained." Paragraph 30, lines 3-6.

Once trained by determining a value for a sensitivity parameter 26 by using the sequences 24 generated from the data training window 16, the detector 22 monitors the data contained within the testing window 18 to determine whether the data in the testing window 18 contains the sort of event or exemplify the sort of property the detector 22 is designed to detect. Paragraph 33, lines 1-8. As can be appreciated, the detector 22 is configured to detect "something" in the data stream 12. Paragraph 34, lines 1-2. That is to say, the detector 22 is configured to monitor the data stream 12 to detect something of interest, such as the occurrence or non-occurrence of a notable event or the implication that the data producing system 14 is in a state of interest. Paragraph 34, lines 2-4. Most commonly, the detector 22 will be configured to detect that a salient change has occurred in the data stream 12 – either that a salient change occurred within the testing window 18 or that the data contained in the testing window 18 is saliently different from the data contained in the training window 16. Paragraph 34, lines 4-8.

In summary, embodiments of the present system are directed to a system configured to receive a data stream. The system includes a trainer which samples a first portion of the data stream (e.g. in a "training window") to train the system to detect events, such as changes, in a second portion of the data stream (e.g. in a "testing window"). That is, the present system uses a first portion of the data stream to train itself to detect something in a second portion of the data stream.

Accordingly, independent claim 1 recites a method comprising "receiving a data stream," "generating a plurality of sequences from a first portion of the data stream," and "training a detector by determining a value for a sensitivity parameter using the plurality of

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sequences." Independent claim 15 recites a method comprising "training a detector using a plurality of sequences generated from a first portion of a data stream, wherein the detector is configured to detect an interesting event in the data stream," and "testing a second portion of the data stream using the trained detector." Independent claim 22 recites a system comprising "a trainer configured to generate a plurality of sequences from a first portion of a data stream and further configured to determine one or more sensitivity parameters based on the sequences," and "a detector configured to detect an interesting event in the data stream using the one or more sensitivity parameters." Independent claim 25 recites a computer-readable medium storing computer instructions for "generating a plurality of sequences from a first portion of a data stream," "determining a sensitivity parameter using the plurality of sequences," and "training a detector to detect an interesting event in the data stream using the sensitivity parameter." Independent claim 27 recites a system comprising "means for generating a plurality of sequences from a first portion of a data stream," "means for determining a sensitivity parameter based on the plurality of sequences," and "means for detecting an interesting event in a second portion of the data stream using the sensitivity parameter."

As a preliminary matter, Applicants respectfully remind the Examiner of his duties and obligations under 37 C.F.R. § 1.104 and M.P.E.P. § 707.07. Applicants note that each of independent claims 1, 15, 22, 25 and 27 recite various features and embodiments of the present invention. While certain of the recited features are common to more than one independent claim, other features are not common to each of the claims. In the present office action, the Examiner only directed applicants to certain passages of the Morita reference as purportedly pertaining to independent claim 1 and a portion of claim 15. When a reference is complex or shows or describes inventions other than that claimed by the Applicant, the

particular part relied on by the Examiner must be designated as nearly as practicable and the pertinence of each reference to each independent claim must be clearly explained. *See* 37 C.F.R. § 1.104(2); *See also* M.P.E.P § 707.07. As set forth below, Applicants have responded to the Examiner's rejection with specific regard to claim 1 and a portion of claim 15. To the extent that certain features of independent claims 15, 22, 25 and 27 are also recited in claim 1, Applicants traverse the Examiner's rejection of those claims for reasons set forth with regard to the rejection of independent claim 1. However, Applicants stress that independent claims 15, 22, 25 and 27 each recite respective features which may not be recited in claim 1 and which may provide further distinguishing features with regard to those respective claims. If the Examiner chooses to maintain this rejection, Applicants respectfully request that the Examiner provide a more detailed summary of those features of the recited claims and direct Applicants to the allegedly similar features disclosed in the cited reference with sufficient specificity to allow Applicants to appropriately respond. Notwithstanding this request, Applicants respectfully submit that the Morita reference does not disclose each of the elements recited in any of the independent claims.

In contrast to the present Application, the Morita reference discloses a sensitivity measuring apparatus for measuring the sensitivity of a fire detector in a fire alarm system. Col. 1, lines 8-10. As disclosed in the Morita reference, a sensitivity measuring apparatus 10 receives an output signal of an ionization type smoke detector SEi and outputs a sensitivity value corresponding to this output signal. Col. 4, lines 61-66. The sensitivity measuring apparatus 10 includes a ROM 22 which stores a reference table indicating the correspondence between the output signal value received from the fire detector SEi and the sensitivity value corresponding to that particular type of fire detector SEi. Col. 5, lines 17-20. The sensitivity measuring apparatus 10 further includes a number of RAMs 31-36, configured to store various

measured values and calibration values, and further includes a number of LEDs, L1-L6 configured to indicate certain information related to the type and sensitivity of the fire detector SEi. Col. 5, lines 21-29; Col. 5, lines 43-57.

With specific regard to the rejection of independent claim 1, Applicants respectfully submit that the Morita reference does not disclose "generating a plurality of sequences from a first portion of the data stream," and "training a detector by determining a value for a sensitivity parameter using the plurality of sequences," as recited in claim 1 of the present application. The Examiner correlated the output signal from the smoke detector SEi with the "data stream" recited in claim 1. Using the Examiner's asserted correlation of the output signal from the smoke detector of the Morita reference with the recited "data stream," it should be clear that the Morita reference does not disclose either of the features recited above. Specifically, the Morita reference does not disclose generating a plurality of sequences from a first portion of the output signal received from the smoke detector SEi. Indeed, the Morita reference does not disclose generating sequences from the output signal, at all. There is simply nothing in the Morita reference that can be reasonably interpreted as "a plurality of sequences" generated from the output signal from the smoke detector.

Further, even if the Morita reference did disclose something that could be reasonably interpreted as generating a plurality of sequences from a first portion of the output signal, there is *nothing* in the Morita reference to disclose or suggest training a detector by determining a value for a sensitivity parameter using the plurality of sequences. That is, there is nothing disclosed in the sensitivity measuring apparatus 10 that could be reasonably correlated with "training a detector" using a plurality of sequences generated from the output signal of the smoke detector SEi.

Further, with regard to claim 15, there is nothing in the Morita reference that can be reasonably correlated with "testing a second portion of the data stream using the trained detector." As previously discussed, the Examiner made no specific comments regarding the features uniquely recited in any of the independent claims other than those common to independent claim 1. However, because claim 15 recites "testing," and at least this unique feature was not discussed above with regard to claim 1, to avoid any future rejection of claim 15 based on Morita, Applicants respectfully assert that this feature is also missing from the teachings of Morita.

Because the Morita reference does not disclose at least these features recited in independent claims 1 and 15, the Morita reference cannot possibly anticipate the subject matter recited in independent claims 1 and 15, or those claims dependent thereon. Further, for at least these reasons, the Morita reference cannot possibly anticipate the subject matter recited in independent claims 22, 25 and 27, or those claims dependent thereon. Accordingly, Applicants respectfully request withdrawal of the Examiner's rejections under 35 U.S.C. § 102 and allowance of claims 1, 2, 4, 9, 10, 12, 15-18, 21-23, 25-27 and 30.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 3, 5, 13, 19 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Morita, in view of Cox (U.S. Pat. No. 5,734,592).

Applicants respectfully traverse these rejections. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting

the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

Each of the claims rejected under 35 U.S.C. § 103 is dependent on one of the independent claims rejected under 35 U.S.C. § 102. Based on these dependencies, and for at least the reasons set forth above, Applicants respectfully submit that dependent claims 3, 5, 13, 19 and 24 are also allowable. Accordingly, Applicants respectfully request withdrawal of the Examiner's rejections under 35 U.S.C. § 103 and allowance of those claims.
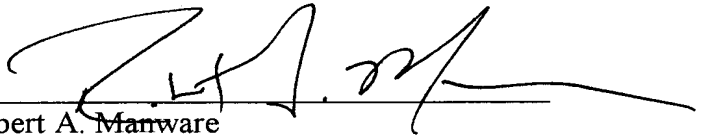
Conclusion

In view of the remarks set forth above, Applicants respectfully request allowance of claims 1-30. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: _August 5, 2005_____

Robert A. Manware
Reg. No. 48,758
(281) 970-4545

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400